

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below-named inventor, Michael A. Tischler, Thomas F. Kuech and Robert P. Vaudo, we hereby declare that my residence, post office address and citizenship are as stated below next to my name.

I believe I am the original first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled "**Bulk Single Crystal Gallium Nitride and Method of Making Same**", the specification of which

(check one) is attached hereto.
 was filed on October 21, 1997 as Application Serial No. 08/955,168
 and was amended _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Claimed
□ yes □ No

(Number) (Country) (Day/Month/Year Filed)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this specification is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

08/188,469 January 27, 1994 Patented-U.S. Patent 5,679,152 issued 10/21/97

(Application Number) (Filing Date) (Status-Patented, Pending, abandoned)

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

STEVEN J. HULTQUIST, REG. NO. 28,021
OLIVER A. ZITZMANN, REG. NO. 38,691

All correspondence in connection with this application should be sent to:

Steven J. Hultquist
Intellectual Property/Technology Law
P. O. Box 14329
Research Triangle Park, NC 27709
Telephone: (919) 419-9350

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of sole or first inventor: Michael A. Fischer Date 3/30/98
Inventor's Signature Michael A. Fischer

Residence: 311 W. Helena, Phoenix, Arizona 85023

Citizenship: USA

Post Office Address: 311 W. Helena, Phoenix, Arizona 85023

Full Name of second inventor: Thomas F. Kuech Date 3-24-98
Inventor's Signature Thomas F. Kuech

Residence: 3713 Council Crest, Madison, Wisconsin 53711

Citizenship: USA

Post Office Address: 3713 Council Crest, Madison, Wisconsin 53711

Full Name of third Inventor: Robert P. Vaudo Date 4-6-98
Inventor's Signature Robert P. Vaudo

Residence: ~~62 Beard Drive~~, New Milford, Connecticut 06776

Citizenship: USA ~~19 Pleasant View Rd.~~

Post Office Address: ~~62 Beard Drive~~, New Milford, Connecticut 06776

~~19 Pleasant View Rd.~~

R.P.V.

ASSIGNMENT

Michael A. Tischler, Thomas F. Kuech and Robert P. Vaudo have made an invention described in the U.S. Patent Application entitled:

“Bulk Single Crystal Gallium Nitride and Method of Making Same”
(Title of patent application)

which is described in U.S. Application No. 08/955,168 filed October 21, 1997 in the United States Patent and Trademark Office.

We assign to Advanced Technology Materials, Inc., 7 Commerce Drive, Danbury, Connecticut 06810 all of our ownership and rights in:

- (i) the invention and U.S. Patent Application;
- (ii) U.S. Patents on the invention; and
- (iii) corresponding foreign patent applications and patents.

We are making this assignment based on our employment and/or consultative relationship with Advanced Technology Materials, Inc.

We request the Commissioner of Patents and Trademarks of the United States and the appropriate officers of all foreign countries to issue patents on the invention to:

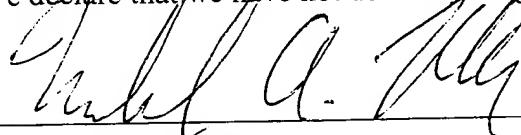
Advanced Technology Materials, Inc.
(Corporate name)

We agree to execute any other legal documents that may be required to effectuate this Assignment.

We agree that we will promptly communicate to Advanced Technology Materials, Inc. all facts which come to our attention affecting the invention or patent rights.

We agree that we will testify in any interference or litigation involving the invention or patent rights.

We declare that we have not done anything in conflict with this Assignment.



(Inventor's signature)

3/30/98

Date

Inventor's name: Michael A. Tischler

State of: Arizona *OFFICIAL SEAL*

Cheryl Mockstroth
NOTARY PUBLIC-ARIZONA
MARICOPA COUNTY
My Commission Expires Aug. 18, 2001

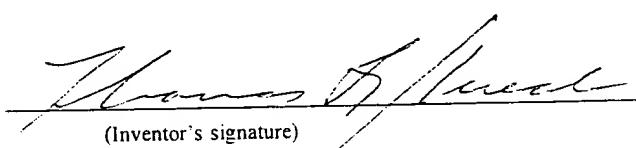
Michael A. Tischler appeared before me on 3/30, 1998. He declared to me that he is the person described in this Assignment. He executed this Assignment before me, and declared that his execution was completely voluntarily.



Notary Public

(SEAL)

My commission expires:



(Inventor's signature)

3-24-98

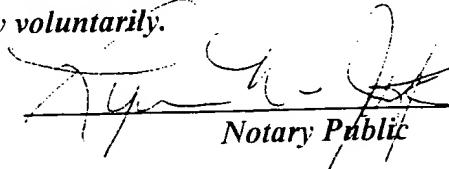
Date

Inventor's name: Thomas F. Kuech

State of: Wisconsin

County of: DANE

Thomas F. Kuech appeared before me on March 24, 1998. He declared to me that he is the person described in this Assignment. He executed this Assignment before me, and declared that his execution was completely voluntarily.



Notary Public

(SEAL)

My commission expires: 8/9/98



(Inventor's signature)

4/6/98

Date

Inventor's name: Robert P. Vaudo

State of: Connecticut

County of: Fairfield

Robert P. Vaudo appeared before me on April 6, 1997. He declared to me that he is the person described in this Assignment. He executed this Assignment before me, and declared that his execution was completely voluntarily.



Janet Goldstein
Notary Public

(SEAL)

My commission expires: 4-30-02



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

JUNE 18, 1998

PTAS

STEVEN J. HULTQUIST
INTELLECTUAL PROPERTY/TECHNOLOGY LAW
P.O. BOX 14329
RESEARCH TRIANGLE PARK, NC 27709



100695235A

2771-161 CIP

PC 498

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RECORDATION DATE: 04/20/1998

REEL/FRAME: 9116/0670
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

TISCHLER, MICHAEL A.

DOC DATE: 03/30/1998

ASSIGNOR:

KUECH, THOMAS F.

DOC DATE: 03/24/1998

ASSIGNOR:

VAUDO, ROBERT P.

DOC DATE: 04/06/1998

ASSIGNEE:

ADVANCED TECHNOLOGY MATERIALS,
INC.
7 COMMERCE DRIVE
DANBURY, CONNECTICUT 06810

SERIAL NUMBER: 08955168

FILING DATE: 10/21/1997

PATENT NUMBER:

ISSUE DATE:

9116/0670 PAGE 2

SHARMALLA SIMPSON, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

MLD 4-80-98

RECO

APR 20 1998

04-27-1998



100695235

Assistant Commissioner for Patents
Box Assignments
Washington, D.C. 20231

Attorney Docket No. 2771-161 CIP

| | |
|---|--|
| 1. A. Name of conveying party(ies): Michael A. Tischler Thomas F. Kuech Robert P. Vaudo | 2. A. Name and address of receiving party(ies): Advanced Technology Materials, Inc. 7 Commerce Drive Danbury, Connecticut 06810 |
| B. Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | B. Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

3. A. Nature of conveyance:

Assignment Merger Security Agreement Change of Name

Other: _____

B. Execution Dates: March 24 & 30, 1998; and April 6, 1998

4. A. If this document is being filed together with a new application, the execution date of the application is: _____

B. Patent Application No.(s)

08/955,168 filed October 21, 1997

C. Patent No.(s)

D. Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Steven J. Hultquist
Address: Intellectual Property/Techñology Law
P.O. Box 14329
Research Triangle Park, NC 27709

7. A. Total fee (37 CFR 3.41) \$ 40.00

Enclosed (Check No. 4955)

Authorized to be charged to deposit account No.

6. Total number of applications and patents involved: 1

SDUCKETT 00000009 08955168

40.00 00

8. Credit any overpayment or charge any underpayment to Deposit Account Number 08-3284 of Intellectual Property/Technology Law.

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Date: April 15, 1998

Steven J. Hultquist

Registration No. 28,021

Total number of pages including cover sheet, attachments, and document: 4

04/22/1998

02 FC:581

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Assistant Commissioner for Patents
 Box Assignments
 Washington, D.C. 20231

Attorney Docket No. 2771-161 CIP

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| B. Execution Dates: <u>March 24 & 30, 1998; and April 6, 1998</u> | |
| 4. A. If this document is being filed together with a new application, the execution date of the application is: _____ | C. Patent No.(s) |
| B. Patent Application No.(s) <u>08/955,168 filed October 21, 1997</u> | D. Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 5. Name and address of party to whom correspondence concerning document should be mailed: Name: Steven J. Hultquist Address: Intellectual Property/Technology Law P.O. Box 14329 Research Triangle Park, NC 27709 | 7. A. Total fee (37 CFR 3.41) \$ 40.00 <input checked="" type="checkbox"/> Enclosed (Check No. 4955) <input type="checkbox"/> Authorized to be charged to deposit account No. |
| 6. Total number of applications and patents involved: <u>1</u> | 8. Credit any overpayment or charge any underpayment to Deposit Account Number 08-3284 of Intellectual Property/Technology Law. |

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To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Date: April 15, 1998

Steven J. Hultquist
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Total number of pages including cover sheet, attachments, and document: 4